HMMWV ROLLOVER PREVENTION AND SURVIVAL

MMWV Rollovers are the number one killer of Soldier in theater after combat actions and IEDs

HMMWV ROLLOVER PREVENTION AND SURVIVAL

TERMINAL LEARNING OBJECTIVE

ACTION – Prevent a HMMWV Rollover

CONDITIONS - In a classroom, provided instruction on preventive and reactive measures, crew duties and emergency steps to take in case of a HMMWV rollover

STANDARD – The student properly identifies precautionary and reactive measures to take in case of a HMMWV rollover by answering the check-on-learning questions with a minimum of 80%.

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OIF/OEF STATISTICS

- **History: 288 HMMWV Rollovers have occurred OIF/OEF causing 82 Fatalities**

HMMWV ROLLOVER PREVENTION AND SURVIVAL

UNDERSTANDING THE CAUSE

Causes:

- **Speed (driving too fast for conditions)**
- **Overly Aggressive Driving (jerking whee**
- **Unfamiliar Terrain**
- **Inadequate driver/crew training**
- **High Center-of-Gravity/Vehicle Payload**
- **Bad Road Surface conditions**
- **Interference from local population**
- **Operating near bodies of water**
- **Explosives detonation**

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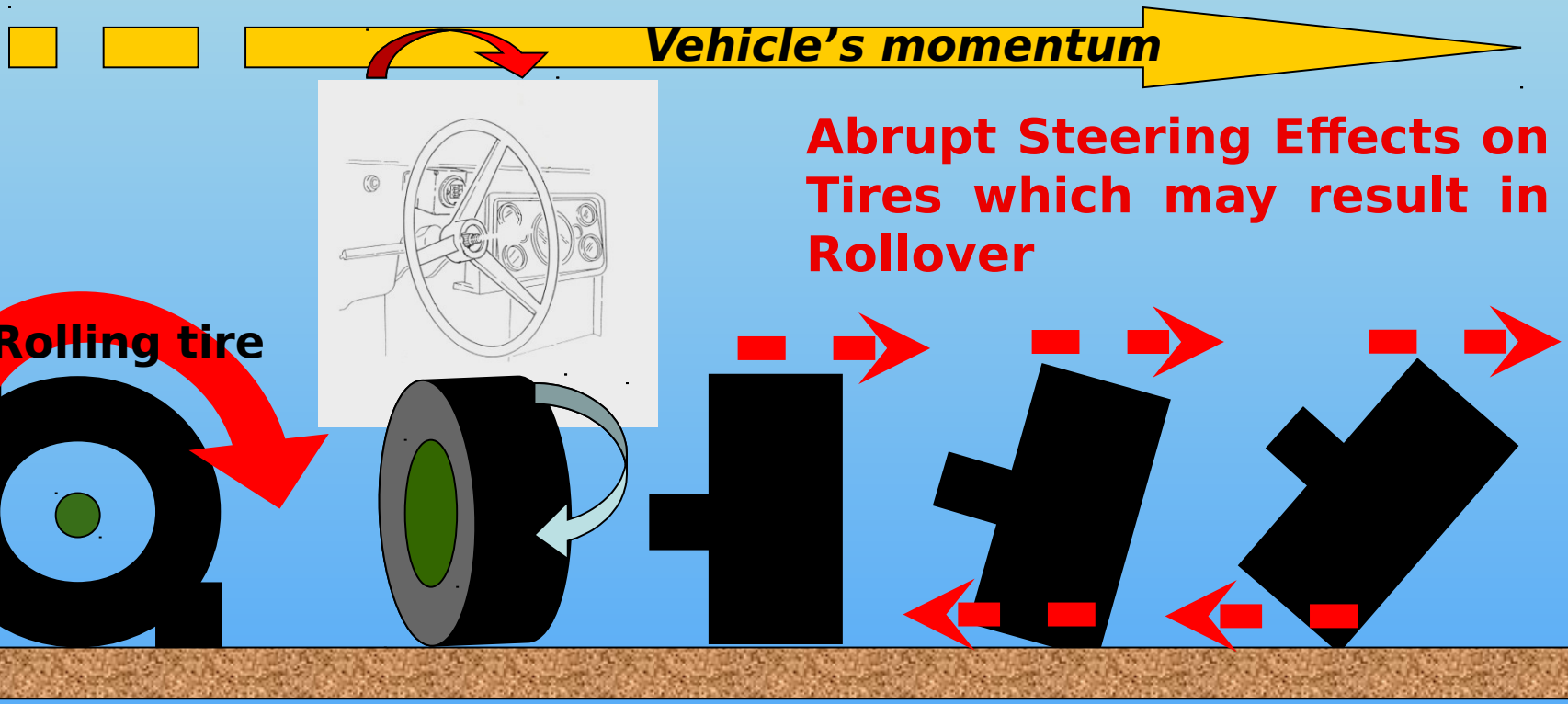
SPEED

“TRAINING REDUCES PANIC!”

“EXPERIENCE PREVENTS ROLLOVERS!”

HMMWV ROLLOVER PREVENTION AND SURVIVAL

OVERLY AGGRESSIVE DRIVING


Vehicle's momentum
Abrupt Steering Effects on Tires which may result in Rollover
Rolling tire
The momentum of the Center of Gravity pulls the vehicle ove
CoG

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ROAD AND TERRAIN CONDITIONS

The HMMWV is designed to climb obstacles not push them. This characteristic has caused some vehicle rollovers. Gunner should be mindful and react quickly to duck into vehicle.

NADEQUATE DRIVER/CREW TRAINING

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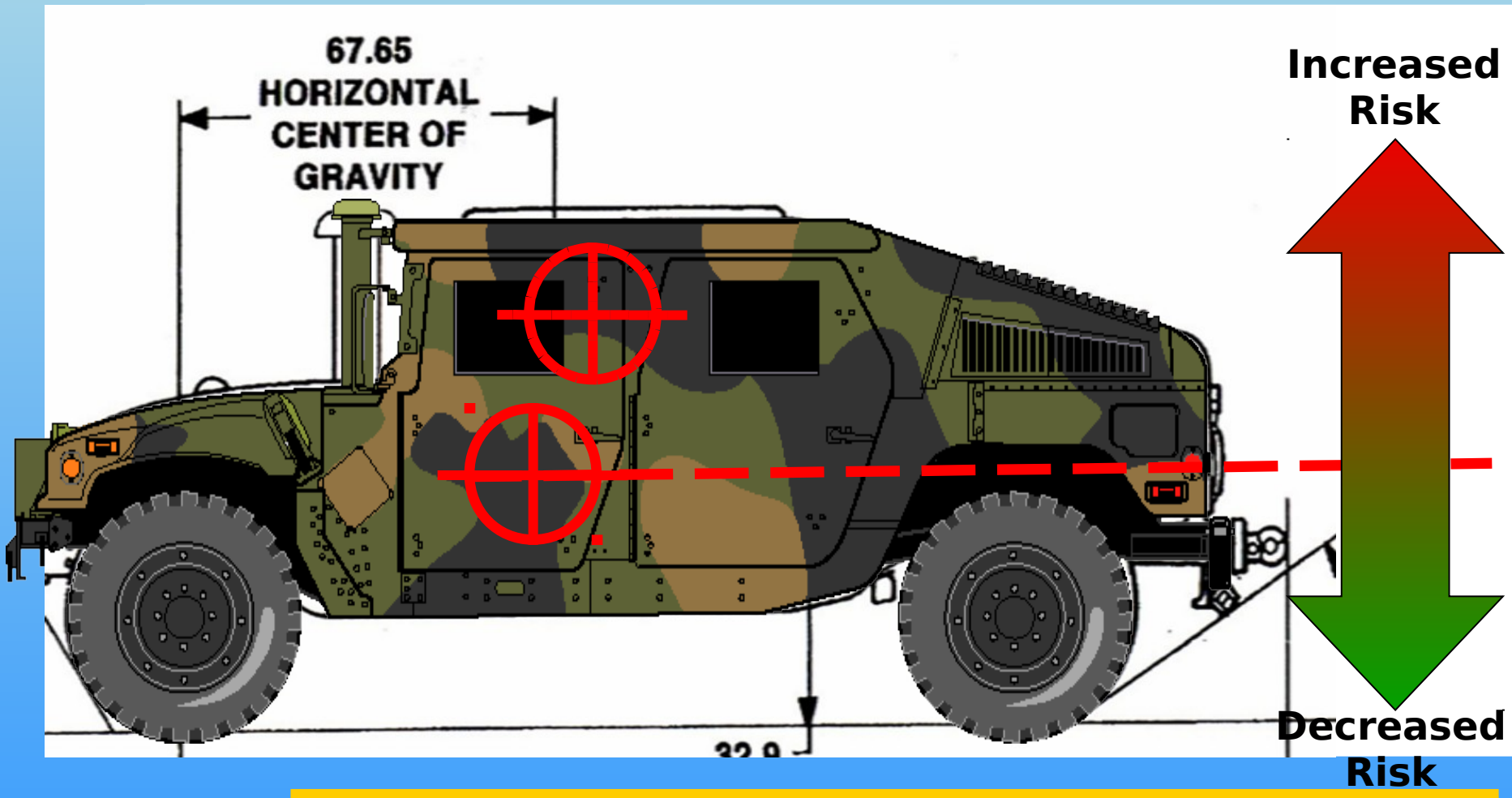
CENTER OF GRAVITY



The Higher the CoG, the Higher the Risk

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VEHICLE PAYLOADS

M1114 Limits
Payload = **2300** lbs
or **1043** kg

- Crew
- Winch
- Gunner's Prot Kit
- Spare Tire
- Weapons
- All cargo

Secure ALL items!

Don't overload the vehicle

BAD ROAD SURFACE CONDITIONS

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INTERFERENCE FROM LOCAL POPULATION

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WATER PRECAUTIONS

When in the vicinity of water and tactical conditions permit:

- Reduce speed and stop vehicle
- Inform crewmembers that you are operating around potential water hazards
- Make a Risk Assessment of the terrain and route before proceeding
- Maintain orientation by wearing seatbelts and
- Unlock combat door locks

EXPLOSIVES DETONATION

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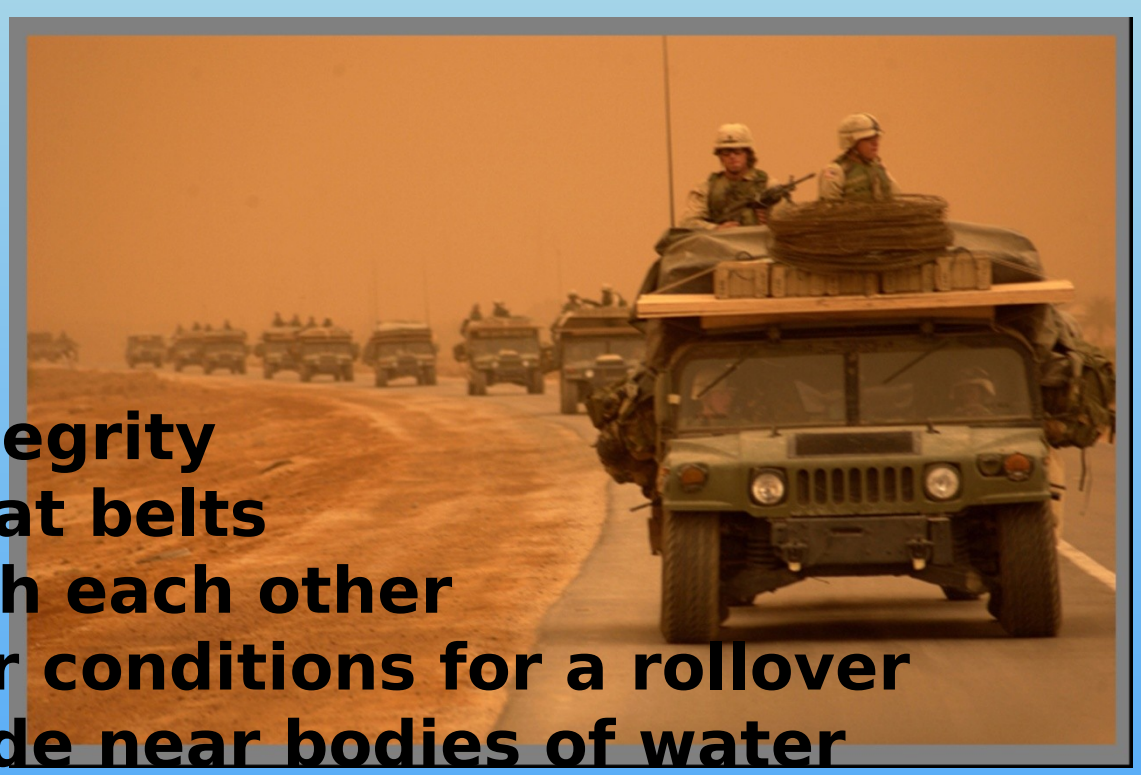
TEAMWORK



- Work as a Team
- Maintain crew integrity
- Enforce use of seat belts
- Communicate with each other
- Identify terrain or conditions for a rollover
- Use a ground guide near bodies of water
- Team member positioning within the vehicle
- Field of views / sectors
- Gunners should not wear unnecessary equipment that impedes their ability to rapidly drop inside the cab.

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QUICK STEPS FOR IMMINENT ROLLOVER

- ALL – Yell “ROLLOVER, ROLLOVER, ROLLOVER!!”
- ALL – Brace against inside structure of vehicle
- Driver/TC/PAX – Brace against floorboard
- Driver/TC/PAX – Tuck chin into chest
- Gunner – Forcefully duck down into gunner cupola
- ALL – Attempt to grasp gunner to pull inside vehi

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ACTIONS DURING A ROLLOVER

- **Driver – Continue to navigate the vehicle as long as control is possible.**
- **ALL - Brace chin down against chest. Keep it there.**
- **DRIVER/PAX/TC - Brace against floorboard and inside vehicle structure.**
- **Attempt to maintain coherent orientation during roll.**
- **GUNNER – MUST drop down inside of gunners' seat as quickly as possible.**
- **Driver/PAX/T ab and hold gunner into vehicle.**

PLAY VIDEO (7:06)

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ACTIONS AFTER A ROLLOVER

- ALL – Unplug headset
- Release seat belt (use caution, you may be suspend
- Assess injuries
- Unlock combat doors
- Exit vehicle w/weapon by quickest route
- Assist other crewmembers to exit vehicle
- Provide security (keep at safe distance)
- Recover sensitive items
- Assist in vehicle recovery
- TC – REPORT accident

Additional steps for WATER EGRESS

- Remove LBE. body armor, helmet
- Evacuate by shortest route
- Rescue others immediately!
- Provide FIRST AID and SUMMON MEDICAL AID

Check on Learning (1 of 2)

1 – What announcement should be made if rollover is eminent?

ROLLOVER! ROLLOVER! ROLLOVER!

2 – What should the driver attempt to do during a rollover?

Attempt to control vehicle as long as possible

3 – During a rollover, what all crew members EXCEPT the gunner atte

Grab the gunner and pull into vehicle

4 – After a rollover, why should each crew member be cautious about releasing the seat belt?

They may be suspended, which may cause injury

5 – After releasing the seat belts, what should all crew members do?

Assess casualties

Check on Learning (2 of 2)

6. Which route should be taken to exit vehicle?

Quickest route

7. Which locks should be immediately unlocked if possible?

Combat Locks

8. What is the senior occupant (TC) responsible for doing once all crew members have exited vehicle?

Report the Accident

9. In the case of WATER EGRESS, what should be the first thing the crew does?

Remove all individual equipment

10. In the case of WATER EGRESS, who are the rescuers?

All crew members

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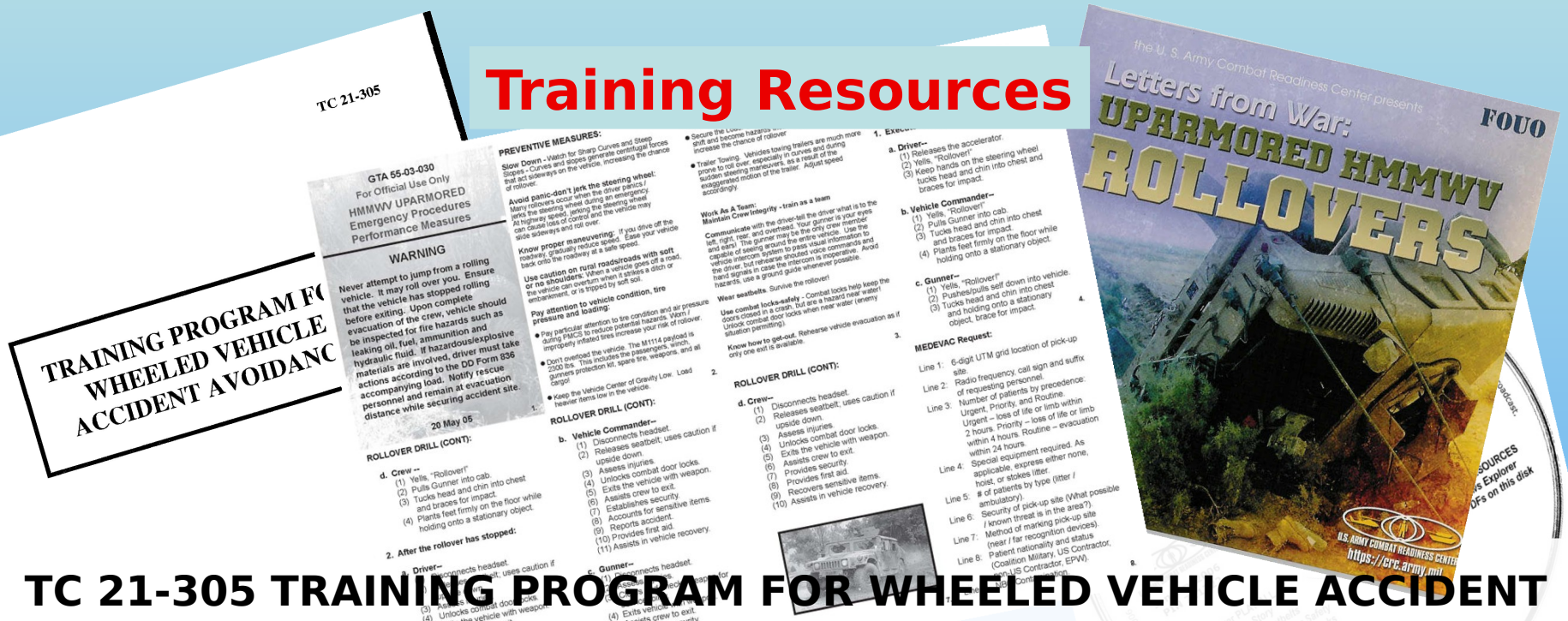
SURVIVE the Rollover!

SUMMARY

- Work as a Team
- Maintain Crew Integrity
- Communicate with the Driver
- Identify Terrain or Conditions for a Rollover
- Use a Ground Guide near bodies of water if clearance is in question
- Team member positioning within the vehicle
- Field of View
- Enforce the Use of Seat belts

HMMWV ROLLOVER PREVENTION AND SURVIVAL

Training Resources


TC 21-305
TRAINING PROGRAM FO
WHEELED VEHICLE
ACCIDENT AVOIDANC
GTA 55-03-030
For Official Use Only
HMMWV UPARMORED
Emergency Procedures
Performance Measures
WARNING
Never attempt to jump from a rolling vehicle. It may roll over you. Ensure that the vehicle has stopped rolling before exiting. Upon complete evacuation of the crew, vehicle should be inspected for fire hazards such as leaking oil, fuel, ammunition and hydraulic fluid. If hazardous/explosive materials are involved, driver must take actions according to the DD Form 836 accompanying load. Notify rescue personnel and remain at evacuation distance while securing accident site.
20 May 05
PREVENTIVE MEASURES:
ROLLOVER DRILL (CONT):
the U. S. Army Combat Readiness Center presents
Letters from War:
UPARMORED HMMWV
ROLLOVERS
FOUO
U.S. ARMY COMBAT READINESS CENTER
https://crc.army.mil

TC 21-305 TRAINING PROGRAM FOR WHEELED VEHICLE ACCIDENT AVOIDANCE

GTA 55-03-030 HMMWV UPARMORED Emergency Procedures Performance Measures, 20 May 05

GTA 55-03-031 Water Egress HMMWV Uparmored Rollover Task and Performance Measures, July 05

CRC "Letters from War": UPARMORED HMMWV ROLLOVERS CD Pin 711722

http://www.transchool.eustis.army.mil/training/nonresident/drivwe